

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 1 of 34</b>

1. **POLICY DESCRIPTION:** This policies describes the conditions under which MetroPlus will cover treatment of varicose veins.
  
2. **RESPONSIBLE PARTIES:**  
Medical Management Administration, Utilization Management, Integrated Care Management, Pharmacy, Claim Department, Providers Contracting.
  
3. **DEFINITIONS:**
  - a. **Varicose veins:** A peripheral (not deep) vein which is dilated well beyond it’s normal diameter, with incompetent valves which would normally prevent backflow of blood. The definition of “Normal”, for each of the major lower extremity veins is below.
  - b. **Conservative management of varicose veins:** under medical direction, the patient wears compressive stockings, periodically raises thjeir lower extremities, and uses anti-inflamatory medication.
  - c. **Endovenous catheter ablation:** (EVCA) is a non-specific term that refers introducing a catheter or instrument into the vein to cause the vein to scar and close. The term endovenous catheter ablation refers to the several catheter based minimally invasive alternatives to surgical stripping such as radiofrequency endovenous occlusion (VNUS procedure) and endovenous laser ablation of the saphenous vein (ELAS). In assessing the medical necessity of EVCA, reference should be made to the specific technique that is being employed. (see details below)
  - d. **Sclerotherapy:** Introducing a chemical substance into a vein causing the vein to scar and close. This is a type of endovenous ablation
  - e. **Ligation:** inserting sutures around a vein and tying the vein off, interrupting the blood flow.
  - f. **Subfascial endoscopic perforator vein surgery (SEPS)** is one form of ligation
  - g. **Division:** Cutting the vein to prevent blood flow (after ligation)
  - h. **Stripping:** Surgically removing lengths of vein
  - i. **Phlebectomy or stab phlebectomy:** Another term for surgically removing a length of vein through an incision (“stab”).
  - j. **Ambulatory phlebectomy:** a type of phlebectomy, characterized by removing small lengths of vein through small, closely spaced incisions.
  - k. **Valvular reconstruction:** an operative procedure to re-establish competence of venous valves
  - l. **Minor hemorrhage (for the purpose of this policy):** An injury with less that 100 ml of blood loss, requiring only a simple adhesive dressing to control

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 2 of 34</b>

**m. Significant hemorrhage (for the purpose of this policy):** An injury resulting in more than 100 ml of blood loss, or requiring circumferential compressive dressing or requiring emergent operative interruption of the vein

**4. POLICY: The following treatments may be approved (see exceptions below) for the following veins:**

- I) **Incompetence at the saphenofemoral junction or saphenopopliteal junction.** *This incompetence is the underlying pathology; treatment of these lesions should precede, or be concomitant with, any other treatment of varicose veins.*
- A) Criteria for treatment:
- a. Ultrasound documented junctional reflux duration of 500 milliseconds (ms) or greater in the saphenofemoral or saphenopopliteal vein to be treated; and
  - b. Vein size is 4.5 mm or greater in diameter measured by ultrasound immediately below the saphenofemoral or saphenopopliteal junction (not valve diameter at junction); and
  - c. Saphenous varicosities resulting in any of the following:
    1. Intractable ulceration secondary to venous stasis; or
    2. More than 1 episode of minor hemorrhage from a ruptured superficial varicosity; or a single significant hemorrhage from a ruptured superficial varicosity or
    3. Saphenous varicosities result in either of the following, and symptoms persist despite a 3-month trial of conservative management\* (including analgesics and prescription gradient support compression stockings):
      1. Recurrent superficial thrombophlebitis; or
      2. Severe and persistent pain and swelling interfering with activities of daily living and requiring chronic analgesic medication.
- B) Covered procedures: the following may be appropriate to treat these junctional lesions include: division, stripping, ligation and valvular reconstruction. Endovenous ablation may be appropriate in some circumstances (see below). Sclerotherapy is not considered appropriate for treatment of incompetence at the saphenofemoral or saphenopopliteal junctions. For treatment to be covered, the junctional incompetence should be documented by recent (performed within the past 6 months) doppler or duplex ultrasound scanning, and all of the following criteria are met:

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 3 of 34</b>

**\*Note:** A trial of conservative management is not required for persons with venous stasis ulcers, persistent or recurrent varicosities who have undergone prior endovenous catheter ablation procedures or stripping/division/ligation in the same leg. Conservative management is unlikely to be successful in these situations.

- II) **Great Saphenous or small saphenous veins:**
- a. Criteria for treatment: Prior or concurrent treatment of saphenofemoral or saphenopopliteal vein and a diameter of at least 4 mm in widest diameter of the great saphenous vein/3mm for the small saphenous vein
  - b. Covered procedures: The following procedures may be appropriate: ligation / division / stripping, radiofrequency endovenous occlusion (VNUS procedure), and endovenous laser ablation of the saphenous vein (ELAS) (also known as endovenous laser treatment (EVLT)). Sclerotherapy is not considered appropriate for the great saphenous vein or varicose veins > 7 mm. Treatment may be considered in the following circumstances:
- III) **Incompetent perforating veins located underneath an active or healed venous stasis ulcer,**
- a. Criteria for treatment: vein diameter measured by recent ultrasound of 3.5 mm or greater with outward flow duration of 500 milliseconds duration or more.
  - b. Covered procedures: Surgical ligation (including subfascial endoscopic perforator vein surgery (SEPS)) or endovenous ablation procedures are considered medically necessary for the treatment of (also known as CEAP C5 or C6) (see Appendix).
- IV) **Symptomatic accessory saphenous veins**
- a. Criteria for treatment:
    - i. The great or small saphenous veins have been removed or ablated
    - ii. The accessory vein size is at least 2,5mm
    - iii. Anatomically related persistent junctional reflux through the accessory vein is demonstrated

**Note:** Repeat treatments for the greater saphenous, lesser saphenous and accessory saphenous veins: Initially, endovenous ablation therapy of the first vein and of the second and subsequent veins in each affected extremity is considered medically necessary when criteria are met. (Note: Thus one primary code and one secondary code for each affected leg are considered medically necessary for initial endovenous ablation treatment.). Endovenous ablation therapy is considered medically necessary for persons with persistent or recurrent junctional reflux of the greater saphenous vein, lesser saphenous vein following

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 4 of 34</b>

initial endovenous ablation therapy. Additional endovenous ablation therapy may also be necessary for treatment of accessory saphenous veins as noted above. These procedures are considered experimental and investigational for treatment of varicose tributaries and accessory veins other than the accessory saphenous vein. These procedures are considered cosmetic for all other indications.

**Note:** Doppler or duplex ultrasound studies are considered necessary prior to varicose vein treatment to assess the anatomy and to determine whether there is significant reflux at the saphenofemoral or saphenopopliteal junction requiring surgical repair, and after completion of the treatment to determine the success of the procedure and detect thrombosis. Ultrasound guidance is inclusive of the VNUS or ELAS procedures.

**Note:** The term endovenous catheter ablation (EVCA) is a non-specific term that refers to the several catheter based minimally invasive alternatives to surgical stripping such as radiofrequency endovenous occlusion (VNUS procedure) and endovenous laser ablation of the saphenous vein (ELAS). In assessing the medical necessity of EVCA, reference should be made to the specific technique that is being employed.

**Note on sclerotherapy:** MetroPlus considers liquid or foam sclerotherapy (endovenous chemical ablation e.g., Varithena) one acceptable form of medically necessary adjunctive treatment of symptomatic saphenous veins, varicose tributaries, accessory, and perforator veins 2.5 mm or greater in diameter, measured by recent ultrasound, for persons who meet medical necessity criteria for varicose vein treatment described above and are being treated or have previously been treated by one or more of the procedures noted above for incompetence (i.e., reflux) at the saphenofemoral junction or saphenopopliteal junction. Varithena has not been proven to be more effective than other methods of foam sclerotherapy. Sclerotherapy is not approved for reflux at the saphenofemoral junction or saphenopopliteal junction, or for veins less than 2.5 mm in diameter. . Sclerotherapy is considered cosmetic for treatment of veins less than 2.5 mm in diameter and for all other indications.

**Note on ultrasound guided sclerotherapy:** Metroplus does cover ultrasound guided sclerotherapy as an additional provided or as justification for a higher level code. Ultrasound-monitored or duplex-guided techniques for sclerotherapy have not been shown to definitively increase the effectiveness or safety of this procedure..

**Note on the number of sclerotherapy injections:** The number of medically necessary sclerotherapy injection sessions varies with the number of anatomical areas that have to be treated, as well as the response to each injection. Usually 1 to 3 injections are necessary to obliterate any vessel, and 10 to 40 vessels, or a set of up to 20 injections in each leg, may be

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 5 of 34</b>

treated during one treatment session. Initially, up to two sets of injections of sclerosing solution in multiple veins in each affected leg (i.e., a total of four sets of injections if both legs are affected) are considered medically necessary when criteria are met. (Note: A set of injections is defined as multiple sclerotherapy injections during a treatment session.) Additional injections of sclerosing solution are considered medically necessary for persons with persistent or recurrent symptoms.

**Note on ambulatory phlebectomy or transilluminated powered phlebectomy.** MetroPlus considers ambulatory phlebectomy or transilluminated powered phlebectomy (TriVex System) medically necessary adjunctive treatment of symptomatic saphenous veins, varicose tributaries, accessory, and perforator veins 2.5 mm or greater in diameter for persons who meet the medical necessity criteria for varicose vein treatment described above and who are being treated or have previously been treated by one or more of the procedures noted in section I above for incompetence (i.e., reflux) at the saphenofemoral junction or saphenopopliteal junction. Ambulatory phlebectomy or transilluminated powered phlebectomy is considered experimental and investigational for treatment of junctional reflux as these procedures have not been proven to be effective for these indications. Ambulatory phlebectomy and the TriVex system is considered cosmetic for veins less than 2.5 mm in diameter and all other indications.

**Note on coding for transilluminated powered phlebectomy:** This procedure has not been proven to be superior to other methods of varicose vein removal. Therefore, the TriVex procedure should be billed as any other varicose vein removal procedure.

**Note on coding for stab phlebectomy:** Initially, up to two multiple stab phlebectomy incisions in each affected extremity (i.e., a total of four multiple stab incisions if both legs are affected) are considered medically necessary when criteria are met. Additional multiple stab phlebectomy incisions are considered medically necessary for persons with persistent or recurrent symptoms. (Note: A set of stab phlebectomy incisions is defined as multiple stab phlebectomy incisions during a treatment session.)

**Therapies which MetroPlus considers experimental/inveztigational:**

- **Photothermal sclerosis** ( MetroPlus Health Plan does not cover photothermal sclerosis ( including PhotoDerm VascuLight, VeinLase). Metroplus considers photothermal sclerosis (also referred to as an intense pulsed light source, e.g., the PhotoDerm VascuLight, VeinLase), which is used to treat small veins such as small varicose veins and spider veins, cosmetic because such small veins are cosmetic problems and do not cause pain, bleeding, ulceration, or other medical problems.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 6 of 34</b>

- Transdermal laser treatment** MetroPlus Health Plan considers transdermal laser treatment experimental and investigational for the treatment of large varicose veins because it has not been proven in direct comparative studies to be as effective as sclerotherapy and/or ligation and vein stripping in the treatment of the larger varicose veins associated with significant symptoms (pain, ulceration, inflammation). Note: Although transdermal Nd:YAG laser has been shown to be effective for the treatment of telangiectasias and reticular veins, treatment of these small veins is considered cosmetic.
- Endomechanical or mechanicochemical ablation** MetroPlus Health Plan considers endomechanical or mechanicochemical ablation (MOCA) (e.g., ClariVein) experimental and investigational for varicose veins because it has not been proven to be as effective as established alternatives.
- Asclera polidocanol injection.** MetroPlus Health Plan considers Asclera polidocanol injection as cosmetic; although Asclera has been approved by the Food and Drug Administration (FDA) for the treatment of telangiectasias and reticular veins less than 3 mm in diameter, treatment of these small veins is considered cosmetic.
- Micronized purified flavonoid.** MetroPlus Health Plan considers micronized purified flavonoid fraction for the treatment of varicose veins experimental and investigational because its effectiveness has not been established.
- VeinGogh Ohmic Thermolysis System:** MetroPlus Health Plan considers the VeinGogh Ohmic Thermolysis System experimental and investigational because of insufficient evidence of its effectiveness.
- Medical adhesive:** MetroPlus Health Plan considers the medical adhesive (also referred to as cyanoacrylate superglue, n-butyl-cyanoacrylate) (e.g., VariClose Vein Sealing System, VenaSeal Closure System) for the treatment of varicose veins experimental and investigational because its effectiveness has not been established.

### 5. LIMITATIONS/ EXCLUSIONS:

1. The following procedures are not considered medically necessary because they are regarded as cosmetic:



<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 7 of 34</b>

- a. Injection of reticular veins, telangiectasia or visible subcuticular veins < 4 mm in size (e.g., spider veins, angiomata and hemangiomata). (CPT codes: 36468 and 36469)
- b. Transdermal laser therapy and photodermal sclerosis.
2. Sclerotherapy for the great saphenous vein or varicose veins > 7 mm.
3. Treatment of incompetent perforator veins. (Coverage exception — presence of venous ulcer or history of venous ulcer to prevent recurrence)
4. All other procedure codes not list in the table titled Applicable Procedure codes.
5. Requests received for 2 procedures (occurring on the same day) will be reviewed in the same case, dependent on the LOMN, stating that the second procedure will be done within 14 days of the first procedure.

### 6. APPLICABLE PROCEDURE CODES:

CPT	Description
36470	Injection of sclerosing solution; single vein
36471	multiple veins, same leg
36475	Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; first vein treated
36476	second and subsequent veins treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)
36478	Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; first vein treated
36479	second and subsequent veins treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)
37500	Vascular endoscopy, surgical, with ligation of perforator veins, subfascial (SEPS)
37700	Ligation and division of long saphenous vein at saphenofemoral junction, or distal interruptions
37718	Ligation, division, and stripping, short saphenous vein
37722	Ligation, division, and stripping, long (greater) saphenous veins from saphenofemoral junction to knee or below
37735	Ligation and division and complete stripping of long or short saphenous veins with radical excision of ulcer and skin graft and/or interruption of communicating veins of lower leg, with excision of deep fascia

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 8 of 34</b>

<b>37760</b>	Ligation of perforator veins, subfascial, radical (Linton type), including skin graft, when performed, open, 1 leg
<b>37761</b>	Ligation of perforator vein(s), subfascial, open, including ultrasound guidance, when performed, 1 leg
<b>37765</b>	Stab phlebectomy of varicose veins, one extremity; 10-20 stab incisions [ambulatory]
<b>37766</b>	more than 20 incisions [ambulatory]
<b>37780</b>	Ligation and division of short saphenous vein at saphenopopliteal junction (separate procedure)
<b>37785</b>	Ligation, division, and/or excision of varicose vein cluster(s), one leg
<b>37799</b>	Unlisted procedure, vascular surgery (Stab phlebectomy of varicose veins, one extremity; less than 10 stab incisions)
<b>76942</b>	Ultrasonic guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging supervision and interpretation
<b>93970</b>	Duplex scan of extremity veins including responses to compression and other maneuvers; complete bilateral study
<b>93971</b>	Duplex scan of extremity veins including responses to compression and other maneuvers; unilateral or limited study
<b>J3490</b>	Unclassified drugs
<b>S2202</b>	Echosclerotherapy

## 7. APPLICABLE DIAGNOSIS CODES:

<b>CODE</b>	<b>Description</b>
<b>I80.00</b>	Phlebitis and thrombophlebitis of superficial vessels of unspecified lower extremity
<b>I80.01</b>	Phlebitis and thrombophlebitis of superficial vessels of right lower extremity
<b>I80.02</b>	Phlebitis and thrombophlebitis of superficial vessels of left lower extremity
<b>I80.03</b>	Phlebitis and thrombophlebitis of superficial vessels of lower extremities, bilateral
<b>I80.10</b>	Phlebitis and thrombophlebitis of unspecified femoral vein
<b>I80.11</b>	Phlebitis and thrombophlebitis of right femoral vein
<b>I80.12</b>	Phlebitis and thrombophlebitis of left femoral vein
<b>I80.13</b>	Phlebitis and thrombophlebitis of femoral vein, bilateral
<b>I80.201</b>	Phlebitis and thrombophlebitis of unspecified deep vessels of right lower extremity
<b>I80.202</b>	Phlebitis and thrombophlebitis of unspecified deep vessels of left lower extremity



<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 9 of 34</b>

<b>I80.203</b>	Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities, bilateral
<b>I80.209</b>	Phlebitis and thrombophlebitis of unspecified deep vessels of unspecified lower extremity
<b>I80.221</b>	Phlebitis and thrombophlebitis of right popliteal vein
<b>I80.222</b>	Phlebitis and thrombophlebitis of left popliteal vein
<b>I80.223</b>	Phlebitis and thrombophlebitis of popliteal vein, bilateral
<b>I80.229</b>	Phlebitis and thrombophlebitis of unspecified popliteal vein
<b>I80.231</b>	Phlebitis and thrombophlebitis of right tibial vein
<b>I80.232</b>	Phlebitis and thrombophlebitis of left tibial vein
<b>I80.233</b>	Phlebitis and thrombophlebitis of tibial vein, bilateral
<b>I80.239</b>	Phlebitis and thrombophlebitis of unspecified tibial vein
<b>I80.291</b>	Phlebitis and thrombophlebitis of other deep vessels of right lower extremity
<b>I80.292</b>	Phlebitis and thrombophlebitis of other deep vessels of left lower extremity
<b>I80.293</b>	Phlebitis and thrombophlebitis of other deep vessels of lower extremity, bilateral
<b>I80.299</b>	Phlebitis and thrombophlebitis of other deep vessels of unspecified lower extremity
<b>I80.3</b>	Phlebitis and thrombophlebitis of lower extremities, unspecified
<b>I83.001</b>	Varicose veins of unspecified lower extremity with ulcer of thigh
<b>I83.002</b>	Varicose veins of unspecified lower extremity with ulcer of calf
<b>I83.003</b>	Varicose veins of unspecified lower extremity with ulcer of ankle
<b>I83.004</b>	Varicose veins of unspecified lower extremity with ulcer of heel and midfoot
<b>I83.005</b>	Varicose veins of unspecified lower extremity with ulcer other part of foot
<b>I83.008</b>	Varicose veins of unspecified lower extremity with ulcer other part of lower leg
<b>I83.009</b>	Varicose veins of unspecified lower extremity with ulcer of unspecified site
<b>I83.011</b>	Varicose veins of right lower extremity with ulcer of thigh
<b>I83.012</b>	Varicose veins of right lower extremity with ulcer of calf
<b>I83.013</b>	Varicose veins of right lower extremity with ulcer of ankle
<b>I83.014</b>	Varicose veins of right lower extremity with ulcer of heel and midfoot
<b>I83.015</b>	Varicose veins of right lower extremity with ulcer other part of foot

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 10 of 34</b>

<b>I83.018</b>	Varicose veins of right lower extremity with ulcer other part of lower leg
<b>I83.019</b>	Varicose veins of right lower extremity with ulcer of unspecified site
<b>I83.021</b>	Varicose veins of left lower extremity with ulcer of thigh
<b>I83.022</b>	Varicose veins of left lower extremity with ulcer of calf
<b>I83.023</b>	Varicose veins of left lower extremity with ulcer of ankle
<b>I83.024</b>	Varicose veins of left lower extremity with ulcer of heel and midfoot
<b>I83.025</b>	Varicose veins of left lower extremity with ulcer other part of foot
<b>I83.028</b>	Varicose veins of left lower extremity with ulcer other part of lower leg
<b>I83.029</b>	Varicose veins of left lower extremity with ulcer of unspecified site
<b>I83.10</b>	Varicose veins of unspecified lower extremity with inflammation
<b>I83.11</b>	Varicose veins of right lower extremity with inflammation
<b>I83.12</b>	Varicose veins of left lower extremity with inflammation
<b>I83.201</b>	Varicose veins of unspecified lower extremity with both ulcer of thigh and inflammation
<b>I83.202</b>	Varicose veins of unspecified lower extremity with both ulcer of calf and inflammation
<b>I83.203</b>	Varicose veins of unspecified lower extremity with both ulcer of ankle and inflammation
<b>I83.204</b>	Varicose veins of unspecified lower extremity with both ulcer of heel and midfoot and inflammation
<b>I83.205</b>	Varicose veins of unspecified lower extremity with both ulcer other part of foot and inflammation
<b>I83.208</b>	Varicose veins of unspecified lower extremity with both ulcer of other part of lower extremity and inflammation
<b>I83.209</b>	Varicose veins of unspecified lower extremity with both ulcer of unspecified site and inflammation

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 11 of 34</b>

<b>I83.211</b>	Varicose veins of right lower extremity with both ulcer of thigh and inflammation
<b>I83.212</b>	Varicose veins of right lower extremity with both ulcer of calf and inflammation
<b>I83.213</b>	Varicose veins of right lower extremity with both ulcer of ankle and inflammation
<b>I83.214</b>	Varicose veins of right lower extremity with both ulcer of heel and midfoot and inflammation
<b>I83.215</b>	Varicose veins of right lower extremity with both ulcer other part of foot and inflammation
<b>I83.218</b>	Varicose veins of right lower extremity with both ulcer of other part of lower extremity and inflammation
<b>I83.219</b>	Varicose veins of right lower extremity with both ulcer of unspecified site and inflammation
<b>I83.221</b>	Varicose veins of left lower extremity with both ulcer of thigh and inflammation
<b>I83.222</b>	Varicose veins of left lower extremity with both ulcer of calf and inflammation
<b>I83.223</b>	Varicose veins of left lower extremity with both ulcer of ankle and inflammation
<b>I83.224</b>	Varicose veins of left lower extremity with both ulcer of heel and midfoot and inflammation

### 8. REFERENCES:

1. Dixon PM. Duplex ultrasound in the pre-operative assessment of varicose veins. *Australas Radiol.* 1996;40(4):416-421.
2. Campbell WB, Halim AS, Aertssen A, et al. The place of duplex scanning for varicose veins and common venous problems. *Ann R Coll Surg Engl.* 1996;78(6):490-493.
3. Rutherford RB. *Vascular Surgery.* 4th ed. Philadelphia, PA: W.B. Saunders Co.; 1995.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 12 of 34</b>

4. Barker LR, Burton JR, Zieve PD. Principles of Ambulatory Medicine. 4th ed. Baltimore, MD: Williams and Wilkins; 1995.

5. Schwartz SI, Shires GT, Spencer FC. Principles of Surgery. 6th ed. New York, NY: McGraw-Hill, Inc.; 1994.

6. Liew SCC, Huber D, Jeffs C. Day-only admission for varicose vein surgery. Aust N Z J Surg. 1994;64(10):688-691.

7. Jamieson WG. State of the art of venous investigation. CJS. 1993;36(2):119-128.

8. Fronek A. Non-invasive examination of the venous system in the leg: Presclerotherapy evaluation. J Dermatol Surg Oncol. 1992;15(2):170-171.

9. Houghton AD, Panayiotopoulos Y, Taylor PR. Practical management of primary varicose veins. Br J Clin Pract. 1996;50(2):103-105.

10. Bergan, JJ. The current management of varicose and telangiectatic veins. Surgery Annual. 1993;25(Pt 1):141-156.

11. Neglen P, Einarsson E, Eklof B. The functional long-term value of different types of treatment for saphenous vein incompetence. J Cardiovasc Surg. 1993;34(4):295-301.

12. Goldman MP. Sclerotherapy: Treatment of Varicose and Telangiectatic Leg Veins. 2nd ed. St. Louis, MO: Mosby, Inc., 1995.

13. Goldman MP, Weiss RA, Bergan JJ. Diagnosis and treatment of varicose veins: A review. J Am Acad of Dermatol. 1994;31(3 Pt 1):393-413.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 13 of 34</b>

14.DeGroot WP. Treatment of varicose veins: Modern concepts and methods. J Dermatol Surg. 1989;15(2):191-198.

15.Jakobsen BH. The value of different forms of treatment for varicose veins. Br J Surg. 1979;66(3):182-184..

16.Zimmet SE. Venous leg ulcers: Modern evaluation and management. Dermatol Surg. 1999;25(3):236-241.

17.No authors listed. Recommendations and medical references of ANAES. Indications for surgical treatment of primary varicosities of the legs. J Mal Vasc. 1998;23(4):297-308.

18.Dortu JA, Constancias-Dortu I. [Treatment of varicose veins of the lower limbs by ambulatory phlebectomy (Muller's method): Technique, indications and results]. Ann Chir. 1997;51(7):761-772.

19.No authors listed. Guidelines of care for sclerotherapy treatment of varicose and telangiectatic leg veins. American Academy of Dermatology. J Am Acad Dermatol. 1996;34(3):523-528.

20.ESC Medical Systems. Leg veins: Eliminate unattractive leg veins with PhotoDerm VL. Needham, MA: ESC Medical Systems Ltd., 1996.

21.ESC Medical Systems. Facial spider veins and vascular birthmarks: Eliminate unattractive cosmetic blemishes with PhotoDerm VL. Needham, MA: ESC Medical Systems Ltd., 1996.

22.Goldman MP, Eckhouse S. Photothermal sclerosis of leg veins. Dermatol Surg. 1996;22(4):323-330.

23.De Roos KP, Neumann HA. Muller's ambulatory phlebectomy for varicose veins of the foot. Dermatol Surg. 1998;24(4):465-470.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 14 of 34</b>

24. Ricci S. Ambulatory phlebectomy. Principles and evolution of the method. *Dermatol Surg.* 1998;24(4):459-464.

25. Otley CC, Mensink LM. The phlebectomy probe: A new and useful instrument for ambulatory phlebectomy. *Dermatol Surg.* 1999;25(7):573-575.

26. Olivencia JA. Pitfalls in ambulatory phlebectomy. *Dermatol Surg.* 1999;25(9):722-725.

27. Goldman MP. Closure of the greater saphenous vein with endoluminal radiofrequency thermal heating of the vein wall in combination with ambulatory phlebectomy: Preliminary 6-month follow-up. *Dermatol Surg.* 2000;26(5):452-456.

28. Weiss R. Commentary on endovenous laser. *Dermatol Surg.* 2001;27(3):326-327.

29. Min RJ, Zimmet SE, Isaacs MN, et al. Endovenous laser treatment of the incompetent greater saphenous vein. *J Vasc Interv Radiol.* 2001;12(10):1167-1171.

30. Navarro L, Min RJ, Bone C. Endovenous laser: A new minimally invasive method of treatment for varicose veins -- preliminary observations using an 810 nm diode laser. *Dermatol Surg.* 2001;27(2):117-122.

31. Tisi PV, Beverley CA. Injection sclerotherapy for varicose veins. *Cochrane Database Syst Rev.* 2002;(1):CD001732.

32. Michaels JA, Kendall RJ. Surgery for varicose veins (Protocol for a Cochrane Review). In: *The Cochrane Library, Issue 1, 2002.* Oxford, UK: Update Software.

33. Weiss RA. Endovenous techniques for elimination of saphenous reflux: A valuable treatment modality. *Dermatol Surg.* 2001;27(10):902-905.



<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 15 of 34</b>

34. Pichot O, Sessa C, Chandler JG, et al. Role of duplex imaging in endovenous obliteration for primary venous insufficiency. *J Endovasc Ther.* 2000;7(6):451-459.

35. Chandler JG, Pichot O, Sessa C, et al. Defining the role of extended saphenofemoral junction ligation: A prospective comparative study. *J Vasc Surg.* 2000;32(5):941-953.

36. Manfrini S, Gasbarro V, Danielsson G, et al. Endovenous management of saphenous vein reflux. Endovenous Reflux Management Study Group. *J Vasc Surg.* 2000;32(2):330-342.

37. Goldman MP, Amiry S. Closure of the greater saphenous vein with endoluminal radiofrequency thermal heating of the vein wall in combination with ambulatory phlebectomy: 50 patients with more than 6-month follow-up. *Dermatol Surg.* 2002;28(1):29-31.

38. Weiss RA, Weiss MA. Controlled radiofrequency endovenous occlusion using a unique radiofrequency catheter under duplex guidance to eliminate saphenous varicose vein reflux: A 2-year follow-up. *Dermatol Surg.* 2002;28(1):38-42.

39. Sadick NS. Commentary: Closure of the greater saphenous vein with endoluminal radiofrequency thermal heating of the vein wall in combination with ambulatory phlebectomy: Preliminary 6-month follow-up. *Dermatol Surg.* 2000;26(5):456.

40. Kabnick LS, et al. Twelve and twenty-four month follow-up after endovascular obliteration of saphenous vein reflux - a report from the multi-center registry. *J Phlebology.* 2001;1:17-24.

41. Dauplaise TL, Weiss RA. Duplex-guided endovascular occlusion of refluxing saphenous veins. *J Vasc Technol.* 2001;25(2):79-82.

42. VNUS Medical Technologies, Inc. The VNUS Closure Procedure [website]. San Jose, CA: VNUS; 2002. Available at: <http://www.vnus.com/>. Accessed March 29, 2002.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 16 of 34</b>

43.Arumugasamy M, McGreal G, O'Connor A, et al. The technique of transilluminated powered phlebectomy -- a novel, minimally invasive system for varicose vein surgery. Eur J Vasc Endovasc Surg. 2002;23(2):180-182.

44.Bergan JJ. Varicose veins: Hooks, clamps, and suction. Application of new techniques to enhance varicose vein surgery. Semin Vasc Surg. 2002;15(1):21-26.

45.Scavee V, Theys S, Schoevaerdt JC. Transilluminated powered mini-phlebectomy: Early clinical experience. Acta Chir Belg. 2001;101(5):247-249.

46.Cullum N, Nelson EA, Fletcher AW, Sheldon TA. Compression for venous leg ulcers (Cochrane Review). In: The Cochrane Library, Issue 2, 2002. Oxford: Update Software.

47.Nelson EA, Bell-Syer SEM, Cullum NA. Compression for preventing recurrence of venous ulcers (Cochrane Review). In: The Cochrane Library, Issue 2, 2002. Oxford: Update Software.

48.Nelson EA, Cullum N, Jones J. Venous leg ulcers. In: Clinical Evidence, Issue 8. London, UK: BMJ Publishing Group; December 2002.

49.Kurz X, Kahn SR, Abenhaim L, et al. Chronic venous disorders of the leg: Epidemiology, outcomes, diagnosis and management: summary of an evidence-based report of the VEINES task force. Int Angiol. 1999;18(2):83-102.

50.Smith JJ, Brown L, Greenhalgh RM, Davies AH. Randomised trial of pre-operative colour duplex marking in primary varicose vein surgery: Outcome is not improved. Eur J Vasc Endovasc Surg. 2002;23(4):336-343.

51.Sybrandy JE, Wittens CH. Initial experiences in endovenous treatment of saphenous vein reflux. J Vasc Surg. 2002;36(6):1207-1212.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 17 of 34</b>

52.Sowerby Centre for Health Informatics at Newcastle (SCHIN). Thrombophlebitis. PRODIGY Guidance. Newcastle upon Tyne, UK: SCHIN; updated July 2002. Available at: <http://www.prodigy.nhs.uk/>. Accessed June 17, 2003.

53.Tapley DF, Morris TQ, Rowland LP, et al., eds. Peripheral venous disorders. In: Columbia University College of Physicians and Surgeons Complete Home Medical Guide. New York, NY: Columbia University Medical Center; 2003. Available at: <http://cpmnet.columbia.edu/texts/guide/>. Accessed June 17, 2003.

54.Sadick NS. Long-term results with a multiple synchronized-pulse 1064 nm Nd:YAG laser for the treatment of leg venulectasias and reticular veins. *Dermatol Surg.* 2001;27(4):365-369.

55.Lupton JR, Alster TS, Romero P. Clinical comparison of sclerotherapy versus long-pulsed Nd:YAG laser treatment for lower extremity telangiectases. *Dermatol Surg.* 2002;28(8):694-697

56.Chen JZ, Alexiades-Armenakas MR, Bernstein LJ, et al. Two randomized, double-blind, placebo-controlled studies evaluating the S-Caine Peel for induction of local anesthesia before long-pulsed Nd:YAG laser therapy for leg veins. *Dermatol Surg.* 2003;29(10):1012-1018.

57.National Institute for Clinical Excellence (NICE). Radiofrequency ablation of varicose veins. IP Guidance Number: IPG0008. London, UK: NICE; September 24, 2003. Available at: <http://www.nice.org.uk/cms/ip/ipcat.aspx?c=56896>. Accessed January 2004.

58.Allegra C. Abstract and Commentary: Efficacy of the comprehensive objective mapping, precise image-guided injection, anti-reflux positioning, and sequential sclerotherapy (COMPASS) Technique in the management of greater saphenous varicosities with saphenofemoral incompetence. *American College of Phlebology Venous Digest.* 2003;10(3):3-4. Available at: <http://www.phlebology.org/venousdigest/vd-mar03.pdf>. Accessed December 10, 2003.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 18 of 34</b>

59.National Institute for Clinical Excellence (NICE). Overview of endovenous laser treatment for varicose veins - for first consultation. London, UK: NICE; April 2003. Available at: <http://www.nice.org.uk/docref.asp?d=83598>. Accessed January 2004.

60.National Institute for Clinical Excellence (NICE). Transilluminated powered phlebectomy for varicose veins. Interventional Procedure Guidance 37. London, UK: NICE; January 2004.

61.Gloviczki P, Bergan JJ, Rhodes JM, et al. Mid-term results of endoscopic perforator vein interruption for chronic venous insufficiency: Lessons learned from the North American subfascial endoscopic perforator surgery registry. The North American Study Group. J Vas Surg. 1999;29(3):489-502.

62.Baron HC, Saber AA, Wayne M. Endoscopic subfascial surgery for incompetent perforator veins in patients with active venous ulceration. Surg Endosc. 2001;15(1):38-40.

63.Ciostek P, Myrcha P, Noszczyk W. Ten years experience with subfascial endoscopic perforator vein surgery. Ann Vasc Surg. 2002;16(4):480-487.

64.Bergan JJ. Advances in venous surgery: SEPS and phlebectomy for chronic venous insufficiency. Dermatol Surg. 2002;28(1):26-28.

65.Russell T, Logsdon AL. Subfascial endoscopic perforator surgery: A surgical approach to halting venous ulceration. J Wound Ostomy Continence Nurs. 2002;29(1):33-36.

66.Kalra M, Gloviczki P. Subfascial endoscopic perforator vein surgery: Who benefits? Semin Vasc Surg. 2002;15(1):39-49.

67.Tawes RL, Barron ML, Coello AA, et al. Optimal therapy for advanced chronic venous insufficiency. J Vasc Surg. 2003;37(3):545-551.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 19 of 34</b>

68.Kalra M, Gloviczki P. Surgical treatment of venous ulcers: Role of subfascial endoscopic perforator vein ligation. Surg Clin North Am. 2003;83(3):671-705.

69.Anwar S, Shrivastava V, Welch M, al-Khaffaf H. Subfascial endoscopic perforator surgery: A review. Hosp Med. 2003;64(8):479-483.

70.Bianchi C, Ballard JL, Abou-Zamzam AM, Teruya TH. Subfascial endoscopic perforator vein surgery combined with saphenous vein ablation: Results and critical analysis. J Vasc Surg. 2003;38(1):67-71.

71.Alberta Heritage Foundation for Medical Research (AHFMR). Surgical treatment for chronic venous insufficiency. Edmonton, Canada: AHFMR; 2002.

72.HealthTechnology Board for Scotland (HTBS). Surgery for varicose veins. Glasgow, Scotland: HTBS; 2003.

73.National Institute for Clinical Excellence (NICE). Overview of subfascial endoscopic perforator vein surgery. London, UK: NICE; November 2002. Available at: <http://www.nice.org.uk/docref.asp?d=98362>. Accessed January 2004.

74.Australian Safety and Efficacy Register of New Interventional Procedures - Surgical (ASERNIP/S). Subfascial endoscopic perforator surgery (SEPS) for chronic venous insufficiency. Rapid Review. New and Emerging Techniques - Surgical. Royal Australasian College of Surgeons; June 2003. Available at: <http://www.surgeons.org/asernip-s/nets/procedures/SEPS.pdf>. Accessed January, 2004.

75.National Institute for Clinical Excellence (NICE). Interventional procedure consultation document - subfascial endoscopic perforator vein surgery (SEPS). London, UK: NICE; January 2004. Available at: <http://www.nice.org.uk/article.asp?a=98409>. Accessed January 2004.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 20 of 34</b>

76.McDonagh B, Sorenson S, Gray C, et al. Clinical spectrum of recurrent postoperative varicose veins and efficacy of sclerotherapy management using the compass technique. *Phlebology*. 2003;18(4):173-186.

77.McDonagh B, Huntley DE, Rosenfeld R, et al. Efficacy of the Comprehensive Objective Mapping, Precise Image Guided Injection, Anti-reflux Positioning and Sequential Sclerotherapy (COMPASS) Technique in the management of greater saphenous varicosities and saphenofemoral incompetence. *Phlebology*. 2002;17:19-28.

78.Belcaro G, Nicolaidis AN, Ricci A, et al. Endovascular sclerotherapy, surgery, and surgery plus sclerotherapy in superficial venous incompetence: A randomized, 10-year follow-up trial—final results. *Angiology*. 2000;51(7):529-534.

79.Belcaro G, Cesarone MR, Di Renzo A, et al. Foam-sclerotherapy, surgery, sclerotherapy, and combined treatment for varicose veins: A 10-year, prospective, randomized, controlled trial (VEDICO Trial). *Angiology*. 2003;54(3):307-315.

80.Grange C, Heynen YG, Chevallier A. Indications for surgical treatment of primary varicose veins of the legs. *J de Maladies Vasculaires*. 1998;23(4):297-308.

81.Alberta Heritage Foundation for Medical Research (AHFMR). Sclerotherapy for varicose veins of the legs. Technote. TN 40. AHFMR; October 2003. Available at: [www.ahfmr.ab.ca/hta/hta-publications/technotes/tn40.pdf](http://www.ahfmr.ab.ca/hta/hta-publications/technotes/tn40.pdf). Accessed February 6, 2004.

82.Scott A, Corabain P. Surgical treatments for deep venous incompetence. *Health Technology Assessment*. HTA 32. AHFMR; July 2003. Available at: <http://www.ahfmr.ab.ca/publications.html>. Accessed February 9, 2004.

83.Merchant RF, DePalma RG, Kabnick LS. Endovascular obliteration of saphenous reflux: A multicenter study. *J Vasc Surg*. 2002;35(6):1190-1196.



<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 21 of 34</b>

84.Rautio T, Ohinmaa A, Perala J, et al. Endovenous obliteration versus conventional stripping operation in the treatment of primary varicose veins: A randomized controlled trial with comparison of the costs. J Vasc Surg. 2002;35(5):958-965.

85.Lurie F, Creton D, Eklof B, et al. Prospective randomized study of endovenous radiofrequency obliteration (closure procedure) versus ligation and stripping in a selected patient population (EVOLVeS Study). J Vasc Surg. 2003;38(2):207-214.

86.Min RJ, Khilnani N, Zimmet SE. Endovenous laser treatment of saphenous vein reflux: Long-term results. J Vasc Interv Radiol. 2003;14(8):991-996.

87.Min RJ, Khilnani NM, Golia P. Duplex ultrasound evaluation of lower extremity venous insufficiency. J Vasc Interv Radiol. 2003;14(10):1233-1241.

88.Society of Interventional Radiology. Position statement: Endovenous ablation. Fairfax, VA; Society of Interventional Radiology; December 2003. Available at: [http://www.sirweb.org/clinical/SIR\\_venous\\_ablation\\_statement\\_final\\_Dec03.pdf](http://www.sirweb.org/clinical/SIR_venous_ablation_statement_final_Dec03.pdf). Accessed January 17, 2005.

89.National Institute for Clinical Excellence (NICE). Ultrasound-guided foam sclerotherapy for varicose veins. Interventional Procedure Consultation Document. London, UK: NICE; July 2004. Available at: <http://www.nice.org.uk/page.aspx?o=209238>. Accessed July 30, 2004.

90.Teruya TH, Ballard JL. New approaches for the treatment of varicose veins. Surg Clin North Am. 2004;84(5):1397-1417, viii-ix.

91.Rigby KA, Palfreyman SJ, Beverley C, Michaels JA. Surgery versus sclerotherapy for the treatment of varicose veins. Cochrane Database Syst. Rev. 2004;(4): CD004980.

92.Adi Y, Bayliss S, Taylor R. Systematic review of clinical effectiveness and cost-effectiveness of radiofrequency ablation for the treatment of varicose veins. DPHE Report No. 49. Birmingham, UK: West Midlands Health Technology Assessment Collaboration

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 22 of 34</b>

(WMHTAC), Department of Public Health and Epidemiology, University of Birmingham; 2004.

93.National Institute for Clinical Excellence (NICE). Endovenous laser treatment of the long saphenous vein. Interventional Procedure Guidance 52. London, UK: NICE; 2004.

94.Harstall C, Coribian P. Sclerotherapy for leg varicose veins. Information Paper IP-19. Edmonton, AB: Alberta Heritage Foundation for Medical Research (AHFMR); 2004.

95.National Institute for Clinical Excellence (NICE). Subfascial endoscopic perforator vein surgery. Interventional Procedure Guidance 59. London, UK: NICE; 2004.

96.Medical Services Advisory Committee (MSAC). Endovenous laser treatment (EVL) for varicose veins. MSAC Application 1059. Canberra, Australia: MSAC; 2004.

97.Michaels JA, Campbell WB, Brazier JE, et al. Randomised clinical trial, observational study and assessment of cost-effectiveness of the treatment of varicose veins (REACTIV trial). Health Technol Assess. 2006;10(13):1-196.

98.National Institute for Health and Clinical Excellence (NICE). Ultrasound-guided foam sclerotherapy for varicose veins. Interventional Procedure Guidance 182. London, UK: NICE; 2006.

99.Feldman MD. Endovenous laser for treatment of varicose veins. Technology Assessment. San Francisco, CA: California Technology Assessment Forum (CTAF); June 11, 2003.

100.Kahle B, Leng K. Efficacy of sclerotherapy in varicose veins-- prospective, blinded, placebo-controlled study. Dermatol Surg. 2004;30(5):723-728.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 23 of 34</b>

101.Oxfordshire NHS Trust. Policy Statement 1c: Surgery for the treatment of varicose veins. Priorities Forum Policy Statement. Oxford, UK: National Health Service (NHS); November 2005.

102.Chetter IC, Mylankal KJ, Hughes H, Fitridge R. Randomized clinical trial comparing multiple stab incision phlebectomy and transilluminated powered phlebectomy for varicose veins. Br J Surg. 2006;93(2):169-174.

103.Rosenberg LZ. Sclerotherapy. eMedicine Plastic Surgery Topic 437. Omaha, NE: eMedicine.com; updated September 28, 2006.

104.Michaels JA, Brazier JE, Campbell WB, et al. Randomized clinical trial comparing surgery with conservative treatment for uncomplicated varicose veins. Br J Surg. 2006;93(2):175-181.

105.van Rij AM. Varicose veins. Br J Surg. 2006;93(2):131-132.

106.Subramonia S, Lees TA. The treatment of varicose veins. Ann R Coll Surg Engl. 2007;89(2):96-100.

107.Jia X, Mowatt G, Ho V, et al. Systemic review of the safety and efficacy of foam sclerotherapy for venous disease of the lower limbs. Review Body Report. Prepared for the National Institute for Health and Clinical Excellence (NICE), Interventional Procedures Programme, Review Body for Interventional Procedures (ReBIP) by the University of Aberdeen Health Services Research Unit. London, UK: NICE; November 2006.

108.Jia X, Mowatt G, Burr JM, et al. Systematic review of foam sclerotherapy for varicose veins. Br J Surg. 2007;94(8):925-936.

109.Kendler M, Wetzig T, Simon JC. Foam sclerotherapy -- a possible option in therapy of varicose veins. J Dtsch Dermatol Ges. 2007;5(8):648-654.

110.Weiss R. Varicose veins treated by ambulatory phlebectomy. eMedicine Dermatology Topic 748. Omaha, NE: eMedicine.com; updated August 30, 2007.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 24 of 34</b>

111.Tisi P. Varicose veins. In: BMJ Clinical Evidence. London, UK: BMJ Publishing Group; May 2007.

112.Australian Safety and Efficacy Register of New Interventional Procedures -Surgical (ASERNIP-S). Systematic Review - Treatments for varicose veins. ASERNIP-S Report No. 69. Stepney, SA: Australian Safety and Efficacy Register of New Interventional Procedures - Surgical (ASERNIP-S); October 2008.

113.Yamaki T, Nozaki M, Iwasaka S. Comparative study of duplex-guided foam sclerotherapy and duplex-guided liquid sclerotherapy for the treatment of superficial venous insufficiency. Dermatol Surg. 2004;30(5):718-722.

114.de Zeeuw R, Toonder IM, Wittens CHA, Loots MAM. Ultrasound-guided foam sclerotherapy in the treatment of varicose veins: Tips and tricks. Phlebology. 2005;20(4):159-162.

115.Kakkos SK, Bountouroglou DG, Azzam M, et al. Effectiveness and safety of ultrasound-guided foam sclerotherapy for recurrent varicose veins: Immediate results. J Endovasc Ther. 2006;13(3):357-364.

116.Hertzman PA, Owens R. Rapid healing of chronic venous ulcers following ultrasound-guided foam sclerotherapy. Phlebology. 2007;22(1):34-39.

117.Medical Services Advisory Committee (MSAC). Endovenous laser therapy (ELT) for varicose veins. Assessment report. MSAC Application 1113. Canberra, ACT: MSAC; March 2008.

118.van den Bos R, Arends L, Kockaert M, et al. Endovenous therapies of lower extremity varicosities: A meta-analysis. J Vasc Surg. 2009;49(1):230-239.

119.Al Samaraee A, McCallum IJ, Mudawi A. Endovenous therapy of varicose veins: A better outcome than standard surgery? Surgeon. 2009;7(3):181-186.

120.Leopardi D, Hoggan BL, Fitridge RA, et al. Systematic review of treatments for varicose veins. Ann Vasc Surg. 2009;23(2):264-276.

121.Hoggan BL, Cameron AL, Maddern GJ. Systematic review of endovenous laser therapy versus surgery for the treatment of saphenous varicose veins. Ann Vasc Surg. 2009;23(2):277-287.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 25 of 34</b>

122.Almeida JI, Kaufman J, Göckeritz O, et al. Radiofrequency endovenous ClosureFAST versus laser ablation for the treatment of great saphenous reflux: A multicenter, single-blinded, randomized study (RECOVERY study). *J Vasc Interv Radiol.* 2009;20(6):752-759.

123.Carradice D, Mekako AI, Hatfield J, Chetter IC. Randomized clinical trial of concomitant or sequential phlebectomy after endovenous laser therapy for varicose veins. *Br J Surg.* 2009;96(4):369-375.

124.Ndegwa S, Nkansah E. Endovenous laser therapy for varicose veins: A review of the clinical and cost-effectiveness. Ottawa, ON: Canadian Agency for Drugs and Technologies in Health (CADTH); 2009.

125.U.S. Food and Drug Administration (FDA). FDA approves Asclera to treat small varicose veins. *FDA News.* Rockville, MD: FDA; March 30, 2010.

126.O'Meara S, Cullum NA, Nelson EA. Compression for venous leg ulcers. *Cochrane Database Syst Rev.* 2009;(1):CD000265.

127.Shepherd AC, Gohel MS, Brown LC, et al. Randomized clinical trial of VNUS ClosureFAST radiofrequency ablation versus laser for varicose veins. *Br J Surg.* 2010;97(6):810-818.

128.Rasmussen LH, Bjoern L, Lawaetz M, et al. Randomised clinical trial comparing endovenous laser ablation with stripping of the great saphenous vein: Clinical outcome and recurrence after 2 years. *Eur J Vasc Endovasc Surg.* 2010;39(5):630-635.

129.Goode SD, Chowdhury A, Crockett M, et al. Laser and radiofrequency ablation study (LARA study): A randomised study comparing radiofrequency ablation and endovenous laser ablation (810 nm). *Eur J Vasc Endovasc Surg.* 2010;40(2):246-253.

130.Pares JO, Juan J, Tellez R, et al. Varicose vein surgery: Stripping versus the CHIVA method: A randomized controlled trial. *Ann Surg.* 2010;251(4):624-631.

131.Rabe E, Pannier F. Sclerotherapy of varicose veins with polidocanol based on the guidelines of the German Society of Phlebology. *Dermatol Surg.* 2010;36 Suppl 2:968-975.

132.Brar R, Nordon IM, Hinchliffe RJ, et al. Surgical management of varicose veins: Meta-analysis. *Vascular.* 2010;18(4):205-220.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 26 of 34</b>

133.Ontario Ministry of Health and Long-Term Care, Medical Advisory Secretariat (MAS). Endovascular laser treatment for varicose veins. Toronto, ON: MAS; 2010;10(6).

134.Mariani F, Marone EM, Gasbarro V, et al. Multicenter randomized trial comparing compression with elastic stocking versus bandage after surgery for varicose veins. J Vasc Surg. 2011;53(1):115-122.

135.Helmy ElKaffas K, ElKashef O, ElBaz W. Great saphenous vein radiofrequency ablation versus standard stripping in the management of primary varicose veins - a randomized clinical trial. Angiology. 2011;62(1):49-54.

136.De Maeseneer M, Pichot O, Cavezzi A, et al. Duplex ultrasound investigation of the veins of the lower limbs after treatment for varicose veins - UIP consensus document. Eur J Vasc Endovasc Surg. 2011;42(1):89-102.

137.Murad MH, Coto-Yglesias F, Zumaeta-Garcia M, et al. A systematic review and meta-analysis of the treatments of varicose veins. J Vasc Surg. 2011;53(5 Suppl):49S-65S.

138.Rasmussen LH, Lawaetz M, Bjoern L, et al. Randomized clinical trial comparing endovenous laser ablation, radiofrequency ablation, foam sclerotherapy and surgical stripping for great saphenous varicose veins. Br J Surg. 2011;98(8):1079-1087.

139.Nesbitt C, Eifell RK, Coyne P, et al. Endovenous ablation (radiofrequency and laser) and foam sclerotherapy versus conventional surgery for great saphenous vein varices. Cochrane Database Syst Rev. 2011;(10):CD005624.

140.Medical Services Advisory Committee (MSAC). Consultation Decision Analytic Protocol (DAP) to guide the assessment of radiofrequency ablation for the treatment of varicose veins due to chronic venous insufficiency. MSAC Application 1166. Canberra, ACT: MSAC; November 11, 2011.

141.Gloviczki P, Comerota AJ, Dalsing MC, et al.; Society for Vascular Surgery; American Venous Forum. The care of patients with varicose veins and associated chronic venous diseases: Clinical practice guidelines of the Society for Vascular Surgery and the American Venous Forum. J Vasc Surg. 2011;53(5 Suppl):2S-48S.

142.Ontario Ministry of Long-Term Care, Medical Advisory Secretariat (MAS). Endovascular radiofrequency ablation for varicose veins: An evidence-based analysis. Ontario Health Technology Assessment Series. Toronto, ON: MAS; February 2011;11(1):1-93.



<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 27 of 34</b>

143.Rasmussen L, Lawaetz M, Bjoern L, et al. Randomized clinical trial comparing endovenous laser ablation and stripping of the great saphenous vein with clinical and duplex outcome after 5 years. *J Vasc Surg.* 2013;58(2):421-426.

144.Biemans AA, Kockaert M, Akkersdijk GP, et al. Comparing endovenous laser ablation, foam sclerotherapy, and conventional surgery for great saphenous varicose veins. *J Vasc Surg.* 2013;58(3):727-734.

145.Navarro TP, Delis KT, Ribeiro AP. Clinical and hemodynamic significance of the greater saphenous vein diameter in chronic venous insufficiency. *Arch Surg.* 2002;137(11):1233-1237.

146.Mdez-Herrero A, Gutiérrez J, Cambor L, et al. The relation among the diameter of the great saphenous vein, clinical state and haemodynamic pattern of the saphenofemoral junction in chronic superficial venous insufficiency. *Phlebology.* 2007;22(5):207-213.

147.Engelhorn C, Engelhorn A, Salles-Cunha S, et al. Relationship between reflux and greater saphenous vein diameter. *J Vasc Technol.* 1997;21(3):167-172.

148.Sandri JL, Barros FS, Pontes S, et al. Diameter-reflux relationship in perforating veins of patients with varicose veins. *J Vasc Surg.* 1999 Nov;30(5):867-874.

149.Yamamoto N, Unno N, Mitsuoka H, et al. Preoperative and intraoperative evaluation of diameter-reflux relationship of calf perforating veins in patients with primary varicose vein. *J Vasc Surg.* 2002;36(6):1225-1230.

150.Musil D, Herman J, Mazuch J. Width of the great saphenous vein lumen in the groin and occurrence of significant reflux in the sapheno-femoral junction. *Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub.* 2008;152(2):267-270.

151.Morbio AP, Sobreira ML, Rollo HA. Correlation between the intensity of venous reflux in the saphenofemoral junction and morphological changes of the great saphenous vein by duplex scanning in patients with primary varicosis. *Int Angiol.* 2010;29(4):323-330.

152.Kurt A, Unlü UL, Ipek A, et al. Short saphenous vein incompetence and chronic lower extremity venous disease. *J Ultrasound Med.* 2007;26(2):163-167.

153.Mendoza E, Blättler W, Amsler F. Great saphenous vein diameter at the saphenofemoral junction and proximal thigh as parameters of venous disease class. *Eur J Vasc Endovasc Surg.* 2013;45(1):76-83.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 28 of 34</b>

154.Barros MV, Labropoulos N, Ribeiro AL, et al. Clinical significance of ostial great saphenous vein reflux. *Eur J Vasc Endovasc Surg.* 2006;31(3):320-324.

155.Mueller RL, Raines JK. ClariVein mechanochemical ablation: Background and procedural details. *Vasc Endovascular Surg.* 2013;47(3):195-206.

156.Vun S, Rashid S, Blest N, Spark J. Lower pain and faster treatment with mechanochemical endovenous ablation using ClariVein. *Phlebology.* 2015;30(10):688-692.

157.Bootun R, Lane T, Dharmarajah B, Lim C, et al. Intra-procedural pain score in a randomised controlled trial comparing mechanochemical ablation to radiofrequency ablation: The Multicentre Venefit versus ClariVein for varicose veins trial. *Phlebology.* 2016a;31(1):61-65.

158.Bishawi M, Bernstein R, Boter M, et al. Mechanochemical ablation in patients with chronic venous disease: A prospective multicenter report. *Phlebology.* 2013;29(6):397-400.

159.van Eekeren RR, Boersma D, Konijn V, et al. Postoperative pain and early quality of life after radiofrequency ablation and mechanochemical endovenous ablation of incompetent great saphenous veins. *J Vasc Surg.* 2013;57(2):445-450.

160.Elias S, Raines JK. Mechanochemical tumescentless endovenous ablation: Final results of the initial clinical trial. *Phlebology.* 2012;27(2):67-72.

161.Lawson J, Gauw S, van Vlijmen C, et al. Sapheon: The solution? *Phlebology.* 2013;28 Suppl 1:2-9.

162.Markovic JN, Shortell CK. Varicose vein surgery. *Scientific American Surgery,* August 2014.

163.Tassie E, Scotland G, Brittenden J, et al; CLASS study team. Cost-effectiveness of ultrasound-guided foam sclerotherapy, endovenous laser ablation or surgery as treatment for primary varicose veins from the randomized CLASS trial. *Br J Surg.* 2014;101(12):1532-1540.

164.Todd KL 3rd, Wright DI; VANISH-2 Investigator Group. The VANISH-2 study: A randomized, blinded, multicenter study to evaluate the efficacy and safety of polidocanol endovenous microfoam 0.5% and 1.0% compared with placebo for the treatment of saphenofemoral junction incompetence. *Phlebology.* 2014;29(9):608-618.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 29 of 34</b>

165. Brittenden J, Cotton SC, Elders A, et al. A randomized trial comparing treatments for varicose veins. *N Engl J Med.* 2014;371(13):1218-1227.

166. Biocompatibles, Inc. Varithena (polidocanol injectable foam), for intravenous use. Prescribing Information. Oxford, CT: Biocompatibles; June 2014.

167. Bond K, Harstall C, Dennett L, et al. Endovenous ablation interventions for symptomatic varicose veins of the legs. Edmonton, AB: Institute for Health Economics; September 2014.

168. National Institute for Health and Care Excellence (NICE). Varicose veins in the legs. The diagnosis and management of varicose veins. NICE Clinical Guideline 168. London, UK: NICE; July 2013.

169. McHugh SM, Leahy AL. What next after thermal ablation for varicose veins: Non-thermal ablation? *Surgeon.* 2014;12(5):237-238.

170. Toonder IM, Lam YL, Lawson J, Wittens CH. Cyanoacrylate adhesive perforator embolization (CAPE) of incompetent perforating veins of the leg, a feasibility study. *Phlebology.* 2014;29(1 suppl):49-54.

171. Morrison N, Gibson K, McEnroe S, et al. Randomized trial comparing cyanoacrylate embolization and radiofrequency ablation for incompetent great saphenous veins (VeClose). *J Vasc Surg.* 2015;61(4):985-994.

172. Food and Drug Administration. FDA approves closure system to permanently treat varicose veins. FDA: Silver Spring, MD. February 20, 2015. Available at: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm435082.htm>. Accessed December 21, 2015.

173. Alguire PC, Scovell S. Overview and management of lower extremity chronic venous disease. UpToDate Inc., Waltham, MA. Last reviewed November 2015.

174. El-Sheikha J, Carradice D, Nandhra S, et al. Systematic review of compression following treatment for varicose veins. *Br J Surg.* 2015;102(7):719-725.

175. Pietrzycka A, Kózka M, Urbanek T, et al. Effect of micronized purified flavonoid fraction therapy on endothelin-1 and TNF- $\alpha$  levels in relation to antioxidant enzyme balance in the peripheral blood of women with varicose veins. *Curr Vasc Pharmacol.* 2015;13(6):801-808.

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 30 of 34</b>

176. Brittenden J, Cotton SC, Elders A, et al. Clinical effectiveness and cost-effectiveness of foam sclerotherapy, endovenous laser ablation and surgery for varicose veins: Results from the Comparison of LAser, Surgery and foam Sclerotherapy (CLASS) randomised controlled trial. *Health Technol Assess.* 2015;19(27):1-342.

177. Witte ME, Reijnen MM, de Vries JP, Zeebregts CJ. Mechanochemical endovenous occlusion of varicose veins using the ClariVein® device. *Surg Technol Int.* 2015;26:219-225.

178. Marsden G, Perry M, Bradbury A, et al. A cost-effectiveness analysis of surgery, endothermal ablation, ultrasound-guided foam sclerotherapy and compression stockings for symptomatic varicose veins. *Eur J Vasc Endovasc Surg.* 2015;50(6):794-801.

179. Deijen CL, Schreve MA, Bosma J, et al. Clarivein mechanochemical ablation of the great and small saphenous vein: Early treatment outcomes of two hospitals. *Phlebology.* 2016;31(3):192-197.

180. Lam YL, Toonder IM, Wittens CH. Clarivein® mechano-chemical ablation an interim analysis of a randomized controlled trial dose-finding study. *Phlebology.* 2016;31(3):170-1766.

181. Todd KL, 3rd, Wright D, Orfe E. The durability of polidocanol endovenous microfoam treatment effect on varicose vein symptoms and appearance in patients with saphenofemoral junction incompetence: One-year results from the VANISH-2 Study. *J Vasc Surg Venous Lymphat Disord.* 2014;2(1):112.

182. King JT, O'Byrne M, Vasquez M, Wright D; Group V-I. Treatment of truncal incompetence and varicose veins with a single administration of a new polidocanol endovenous microfoam preparation improves symptoms and appearance. *Eur J Vasc Endovasc Surg.* 2015;50(6):784-793.

183. Todd KL, 3rd, Wright DI; Group V-I. Durability of treatment effect with polidocanol endovenous microfoam on varicose vein symptoms and appearance (VANISH-2). *J Vasc Surg Venous Lymphat Disord.* 2015;3(3):258-264.

184. Carugo D, Ankrett DN, Zhao X, et al. Benefits of polidocanol endovenous microfoam (Varithena(R)) compared with physician-compounded foams. *Phlebology.* 2016;31(4):283-295.

185. Gibson K, Kabnick L; Varithena 013 Investigator G. A multicenter, randomized, placebo-controlled study to evaluate the efficacy and safety of Varithena(R) (polidocanol endovenous

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 31 of 34</b>

microfoam 1%) for symptomatic, visible varicose veins with saphenofemoral junction incompetence. *Phlebology*. March 2016.

186.van der Velden SK, Biemans AA, De Maeseneer MG, et al. Five-year results of a randomized clinical trial of conventional surgery, endovenous laser ablation and ultrasound-guided foam sclerotherapy in patients with great saphenous varicose veins. *Br J Surg*. 2015;102(10):1184-1194.

187.Bootun R, Lane TR, Davies AH. The advent of non-thermal, non-tumescent techniques for treatment of varicose veins. *Phlebology*. 2016b;31(1):5-14.

188.Leung CC, Carradice D, Wallace T, Chetter IC. Endovenous laser ablation versus mechanochemical ablation with ClariVein(®) in the management of superficial venous insufficiency (LAMA trial): Study protocol for a randomised controlled trial. *Trials*. 2016;17(1):421.

189.National Institute for Health and Care Excellence. Interventional procedure guidance. Endovenous mechanochemical ablation for varicose veins. NICE. London, UK. Published: May 25, 2016. Available at: <https://www.nice.org.uk/guidance/ipg557>. Accessed September 12, 2016.

190.Bozkurt AK, Yılmaz MF. A prospective comparison of a new cyanoacrylate glue and laser ablation for the treatment of venous insufficiency. *Phlebology*. 2016;31(1 Suppl):106-113.

191.Tekin Aİ, Tuncer ON, Memetoğlu ME, et al. Nonthermal, nontumescent endovenous treatment of varicose veins. *Ann Vasc Surg*. 2016;36:231-235.

192.Venermo M, Saarinen J, Eskelinen E, et al; Finnish Venous Study Collaborators. Randomized clinical trial comparing surgery, endovenous laser ablation and ultrasound-guided foam sclerotherapy for the treatment of great saphenous varicose veins. *Br J Surg*. 2016;103(11): 1438-1444.

193.Tang TY, Kam JW, Gaunt ME. ClariVein® - Early results from a large single-centre series of mechanochemical endovenous ablation for varicose veins. *Phlebology*. 2016 Feb 22 [Epub ahead of print].

194.Yasim A, Eroglu E, Bozoglan O, et al. A new non-tumescent endovenous ablation method for varicose vein treatment: Early results of N-butyl cyanoacrylate (VariClose®). *Phlebology*. 2016 Mar 27 [Epub ahead of print].

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 32 of 34</b>

195. Witte ME, Holewijn S, van Eekeren RR, et al. Midterm outcome of mechanochemical endovenous ablation for the treatment of great saphenous vein insufficiency. First published: October 14, 2016. Available at: <http://journals.sagepub.com/doi/abs/10.1177/1526602816674455>. Accessed January 18, 2017.

196. Lane T, Bootun R, Dharmarajah B, et al. A multi-centre randomised controlled trial comparing radiofrequency and mechanical occlusion chemically assisted ablation of varicose veins - Final results of the Venefit versus Clarivein for varicose veins trial. *Phlebology*. May 24, 2016 [Epub ahead of print].

197. <http://emedicine.medscape.com/article/1126342-overview>

198. The cutoff value of saphenous vein diameter to predict reflux [Korean Surg Soc](#). 2013 Oct;

199. 169–174. Published online 2013 Sep 30. doi: [10.4174/jkss.2013.85.4.169](https://doi.org/10.4174/jkss.2013.85.4.169)

PMCID: PMC3791359

**The cutoff value of saphenous vein diameter to predict reflux**





## Policy and Procedure

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 33 of 34</b>

### 9. REVISION LOG:

REVISIONS	DATE
Creation date	

Approved:

Date:

Approved:

Date:

Sosler Bruce, MD  
Clinical Medical Director

Talya Schwartz, MD  
Chief Medical Officer

<b>Title: Varicose Vein Therapy</b>	<b>Division: Medical Management</b> <b>Department: Utilization Management</b>
<b>Approval Date: 8/14/17</b>	<b>LOB: Medicaid, Medicare, FIDA, HIV SNP, CHP, MetroPlus Gold, Goldcare I&amp;II, Market Plus, Essential, HARP</b>
<b>Effective Date: 8/14/17</b>	<b>Policy Number: UM-MP214</b>
<b>Review Date: 8/14/18</b>	<b>Cross Reference Number:</b>
<b>Retired Date:</b>	<b>Page 34 of 34</b>

### Medical Guideline Disclaimer:

Property of Metro Plus Health Plan. All rights reserved. The treating physician or primary care provider must submit MetroPlus Health Plan clinical evidence that the patient meets the criteria for the treatment or surgical procedure. Without this documentation and information, MetroPlus Health Plan will not be able to properly review the request for prior authorization. The clinical review criteria expressed in this policy reflects how MetroPlus Health Plan determines whether certain services or supplies are medically necessary. MetroPlus Health Plan established the clinical review criteria based upon a review of currently available clinical information (including clinical outcome studies in the peer-reviewed published medical literature, regulatory status of the technology, evidence-based guidelines of public health and health research agencies, evidence-based guidelines and positions of leading national health professional organizations, views of physicians practicing in relevant clinical areas, and other relevant factors). MetroPlus Health Plan expressly reserves the right to revise these conclusions as clinical information changes, and welcomes further relevant information. Each benefit program defines which services are covered. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered and/or paid for by MetroPlus Health Plan, as some programs exclude coverage for services or supplies that MetroPlus Health Plan considers medically necessary. If there is a discrepancy between this guidelines and a member's benefits program, the benefits program will govern. In addition, coverage may be mandated by applicable legal requirements of a state, the Federal Government or the Centers for Medicare & Medicaid Services (CMS) for Medicare and Medicaid members.

All coding and website links are accurate at time of publication.